not exceed ± 0.0015 mm, or along the profiles ± 0.1 mm, and the time required to apply the templates was reduced by a factor of 10. For checking blades finished on modern automatic machines it is proposed to use small induction gauges to measure the clearances rather than the pneumatic gauges used in foreign aviation engineering, because the former measure relatively long lengths of a few millimetres, as well as small clearances. It is possible to apply up to 300 gauges to a blade simultaneously and to light a green signal lamp if the blade passes inspection at all points. If it fails at even one point a red lamp lights; the point can then be located by means of a selector switch. Tests have shown that with induction pick-ups and microammeters an amplification factor of the order of 100 can be obtained. By the use of computers this method of inspection can be made to deliver adjusting signals to the automatic blade-finishing machine. For blades of constant profile it is convenient to use a template arrangement which traverses photoelectric micrometer heads along the blade.

There are 4 figures.

ACCESSION NR: AP4043456 S/0115/64/000/007/0017/0018

AUTHOR: Kostich, B. Ye.

TITLE: DPD-2 remote wire-type length meter

SOURCE: Izmeritel'naya tekhnika, no. 7, 1964, 17-18

TOPIC TAGS: length meter, remote length meter/ DPD-2 length meter

ABSTRACT: The DPD-2 length meter is intended for measuring up to 30 m the length of not readily accessible parts of welding constructions. The idea of the instrument is shown in Enclosure 1. Tests have shown: (a) an error of $(1-1.5)10^{-4}$ L, with L = 6,000 mm, the distance to the object 4,000 mm, and a measuring tape as a reference; (b) an error of $(3.5-4)10^{-5}$ L, with L = 24,000 mm, the distance to the object 4,000 mm, and a calibrated invar wire as a reference. Orig. art. has: 1 figure.

ASSOCIATION: TsNIITmash (Central Scientific-Research Institute of Heavy Machine Building)

SUBMITTED: 00 ENCL: 01

SUB CODE: IE NO REF SOV: 005 OTHER: 000

Card 1/2

KOSTICH, B.Ye.

Using templets for checking the profile of shaped articles.
Izm. tekh. no.9:12-13 S '64. (MIRA 18:3)

L 22729-66 EWT(d)/EWT(m)/EWP(w)/EWP(v)/T-2/EWP(k)/EWP(h)/EWP(l)/ETC(m)-6 IJP(c)
ACC NR: AP6002917 (N) SOURCE CODE: UR/0286/65/000/024/0082/0082
EM

AUTHOR: Kostich, B. Ye.

ORG: none

TITLE: Device for evaluating the allowance on blade fins. Class 42, No. 177101 [announced by Central Scientific Research Institute of Technology and Machine Construction (Tsentral'nyy nauchno-issledovatel'skiy institut tekhnologii i mashinostroyeniya)]

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 24, 1965, 82

TOPIC TAGS: blade profile, quality control, measuring instrument, sensing element

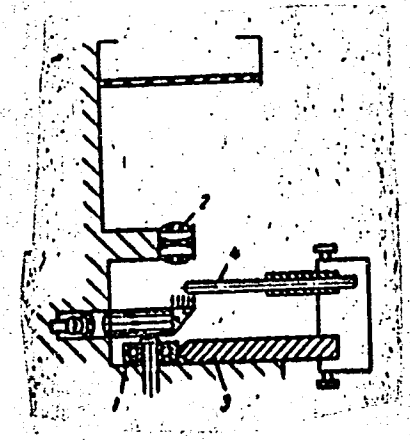
ABSTRACT: This Author Certificate presents a device for evaluating the allowance on blade fins by comparing the true profile of the blank in the form of a needle-shaped model with a profile template of the finished blade at the same section. The device contains an optical system with projector and sensing element. To increase the range of blades that can be measured without using large projection systems, the sensing element in the device is in the form of a roller. The generatrix of the roller is coincident with the principal axis of the projection system. The template and model are simultaneously moved around the roller (see Fig. 1).

Card 1/2 UDC: 531.717.2.002.56:62--226.2/.3

L 22729-66

ACC NR: AP6002917

Fig. 1. 1 - Sensing element; 2 - projection system; 3 - template; 4 - model.



Orig. art. has: 1 figure.

SUB CODE: 13/ SUBM DATE: 09Mar64

Card 2/2 ULR

YUGOSLAVIA/Human and Animal Physiology - Blood. Blood Coagulation. T

Abs Jour : Ref Zhur Biol., No 3, 1959, 12676

Author : Marinkov, S., Kostich, D., Kapamatsija, B.
Inst : -
Title : Anticoagulatory Action of Heparin and the Blood Platelets

Orig Pub : Med. pregled, 1956, 9, No 4, 221-224

Abstract : Heparin (I) manifested an inhibitory action on the coagulation factor in blood platelets (P). Coagulation of bovine plasma with the addition of solution I and $CaCl_2$ did not take place for 20 minutes. Addition to this mixture of P, which possess an anti-heparin action, curtailed the coagulation time to 2 minutes 15 seconds. Heparinized thromboplastin and thrombin were completely reactivated by the addition of suspension I. -- V.Ye. Pastorova

Card 1/1

Regulating the rated inductance of transducers. Izm.tekh. no.3:9 Mr '62. (MIRA 15:2)
(Transducers)

KOSTICH, S

B.A.

A III-9

Experience and results in prefrontal lobotomy. S. Kostich (*Srpski Arkh.*, 1951, 69, 214—228).—The first series of leucotomies to be published in Yugoslavian literature consists of 232 for schizophrenia and 5 for psychoneurosis. The method was a closed one through a parasagittal approach with a specially constructed leucotome. Of 182 operated upon 47 were greatly improved, 70 improved to a lesser extent and 57 unchanged. Five died and 7 relapsed.

S. S. B. GILLIBRAND.

BYKOV, V.A.; ARTEM'YEV, N.S.; KOSTICHEV, Yu.V., student; LEVANOV, V.I., student

Convergence of general test results on the resistance to plastic deformation in shipbuilding steel. Trudy LKI no.16:50-55 '55. (MIRA 13:4)

1. Kafedra soprotivleniya materialov Leningradskogo korablestroitel'nogo instituta (for Bykov). 2. Kafedra detaley mashin Leningradskogo korablestroitel'nogo instituta (for Artem'yev). 3. Korablestroitel'nyy fakul'tet Leningradskogo korablestroitel'nogo instituta (for Kostichev, Levanov).
(Shipbuilding--Supplies) (Steel--Testing)
(Deformations(Mechanics))

UDC 04119-67

ACC NR: AP6031779 SOURCE CODE: PO/0019/66/015/002/0215/0234

AUTHOR: Kostienko, M. W.

ORG: Technical University im. M. I. Kalinin, Leningrad

TITLE: Propagation of h-f oscillations through multiconductor lines

SOURCE: Archiwum elektrotechniki, v. 15, no. 2, 1966, 215-234

TOPIC TAGS: hf vibration, vibration propagation, multiconductor, multiconductor line, hf oscillation, oscillation propagation

ABSTRACT: The author presents a simplified method of calculating the propagation of high frequency vibrations in high voltage power lines based on the principle of "telegraph equations" instead of Maxwell's field equations. The considerations cover the transposition of the conductors, bundled conductors, and the influence of ground wires. An expemplary calculation is given for the three conductor line with bundled conductors in horizontal position and with ground wires. Orig. art. has: 48 formulas, 2 figures, and 3 tables. [Author's abstract]

SUB CODE: 09/ SUBM DATE: 12Feb65/ ORIG REF: 007/ OTH REF: 002/

Card 1/1 KH UDC: 621.372.2:621.3.029.5:621.3.027.3

KOSTIGINA, R. F. and LILENKOV, I. P.

"Some notes about the use of hay, needle and silage juice infusions."

Veterinariya, Vol. 37, No. 1, 1960, p. 59

Kostigina - Vet. Dr. - Vet-Bacteriol-Lab, Arzamas

L 21334-66 T

ACCESSION NR: AP5025534 CZ/0043/65/000/005/0424/0426

AUTHOR: Rusnak, V. (Engineer); Petrovic, J. (Petrovich, Ya.) (Engineer, Candidate of sciences); Kostiha, F. (Kostiga, F.)

TITLE: Apparatus for the preparation of pure solvents

SOURCE: Chemicke zvesti, no. 5, 1965,424-426

TOPIC TAGS: chemical laboratory apparatus, chemical engineering

ABSTRACT: The apparatus is designed for laboratory use, and made of glass. The solvent is heated in a vessel provided with a reflux condenser, and a chemically active agent that can purify the solvent is added. After a desired reaction period the solvent is distilled out of the vessel by simply changing the position of a valve. Overheating of the liquid is prevented by bubbling an inert gas through the boiling liquid. The apparatus is designed for work with a selected gas atmosphere. Orig. art. has: 1 figure.

ASSOCIATION: Ustav Anorganickej Chemie Slovenskej Akademie Vied, Bratislava (Institute of Inorganic Chemistry, Slovak Academy of Sciences) Vyvojove Stredisko pri Chemickom Ustave Slovenskej Akademie Vied, Bratislava (Development Center at the Chemical Institute of the Slovak Academy of Sciences)

Card 1/2

L 21334-66

ACCESSION NR: AP5025534

SUBMITTED: 060ct64	ENCL: 00	SUB CODE: GC
NR REF SOV: 000	OTHER: 002	JPRS

Card 2/2

RUSNAK, Vladimir, inz.; PETROVIC, Jan, inz.; KOSTIHA, Frantisek

Apparatus for preparing pure solvents. Chem zvesti 19 no.5: 424 426 '65.

1. Institute of Inorganic Chemistry of the Slovak Academy of Sciences, Bratislava, Dubravska cesta (for Rusnak and Petrovic). 2. Development Center of the Institute of Chemistry of the Slovak Academy of Sciences, Bratislava, Dubravske cesta. Submitted October 6, 1964.

KOSTIK, F. D.

Biological Chemistry

Dissertation: "The Study of the Biochemical Characteristics of Grapevines Resistant to Phylloxera." Cand Biol Sci, VASKhNIL, (All-Union Academy of Agricultural Sciences imeni Lenin), Leningrad, 1953. (Referativnyy Zhurnal--Khimiya, Moscow, No 3, Feb 54)

SO: SUM 213, 20 Sept 1954

KOSTIK, F. D.

USSR / Plant Diseases--Cultivated Plants 0

Abs Jour: Ref Zhur-Biologiya, No 16, 1958, 73324

Author : Kostik, F.D.

Inst : All-Union Institute for Plant Protection

Title : On the Specialization of Bacteria of the Ps. malvacearum Pest in Cotton Sap

Orig Pub: Sb. tr. Mold. st. Vses. in-ta zashchity rast., 1957, vyp. 2, 61-69

Abstract: Plants of infectious and resistant varieties of cotton, hemp, Abutilon, mungo bean, dolichos, kidney bean and soybean were infected with a thick suspension of Ps. malvacearum by applying the bacteria on the damaged lower surface of the leaf or by means of vacuum-infiltration. The disease appeared only

Card 1/3

TOPOR, N.D.; KOSTIK, O.Ye.

Miocene volcanic ash in the northeastern part of the Moldavian S.S.R. Trudy MGRI 33:145-148 '58. (MIRA 12:12)
(Moldavia--Volcanic ash, tuff, etc.)

IL'IN, I., starshiy mekhanik; KOSTIK, I., gruppovoy inzh.-mekhanik

Experimental operation of the apparatus for magnetic processing of feed water. Mor.flot 21 no.1:28-30 Ja '61. (MIRA 14:6)

1. Plavbaza "Ukraina."

(Feed-water purification)

CHEREVKA, P.P.; MALYUTINA, T.Z.; KOSTIK, N.I.; BYK, I.I.; MIKITYUK, L.P.; KISELEVA, M.I.

Analyzing the composition of high-boiling hydrocarbons in the gases of the oxidative pyrolysis of methane. Khim. prom. 40 no.8:582-585 Ag '64. (MIRA 18:4)

S/035/62/000/008/025/090
A001/A101

AUTHORS: Bratiychuk, M. V., Kostik, R. I.

TITLE: The quiet prominence of June 27, 1960

PERIODICAL: Referativnyy zhurnal, Astronomiya i Geodeziya, no. 8, 1962, 61, abstract 8A402 ("Solnechnyye dannyye", 1961, no. 6, 68 - 70)

TEXT: The spectrum of the prominence was obtained in hydrogen lines up to H_{18}; lines of Ti and Mg were observed. Processed were the lines of hydrogen H_9 - H_{14}, lines of Ti λλ3759.3 and 3761.3 and lines of Mg λλ3838.3 and 3832.34; profiles of spectral lines were measured. Every profile was plotted on the basis of 2 - 3 profiles of emission lines at various exposures. Obtained were the central intensity, expressed in units of intensity of the Sun's center; equivalent width, expressed in equivalent angstroems for the Sun's center, and $\Delta\lambda/\eta$- reduced half-width. The profiles have Doppler cores, in wings is noted additional broadening whose cause is not clear (Stark effect does not take place). Kinetic temperature and turbulent velocity are determined from the half-widths of lines of hydrogen, Mg and Ti: $T_{kin} = 6,350 \pm 350^{\circ}K$, $V_t = (0.0 \pm 0.3)$ km/sec. Populations

Card 1/2

The quiet prominence of June 27, 1960

S/035/62/000/008/025/090
A001/A101

of the quantum hydrogen levels are calculated from equivalent widths of the lines on assumption that self-absorption is absent. Observational data on intensity and population of hydrogen lines agree well with theoretical quantities calculated by V. M. Sobolev's method. There are 5 references.

Ye. Makarova

[Abstracter's note: Complete translation]

Card 2/2

9(3)

SOV/107-59-2-41/55

AUTHOR: Kostik, S. (Leninakan, Armenian SSR)

TITLE: Frequency Measurings Using an Oscillograph (Izmereniye chastot s pomoshch'yu ostsillografa)

PERIODICAL: Radio, 1959, Nr 2, p 55 (USSR)

ABSTRACT: The article deals with the possibility of using an oscillograph for measuring frequencies over 10 megacycles. In order to achieve this, a generator of standard signals and the voltage source to be measured has to be plugged into the circuit, consisting of the rectifying cell and the resistance. As the difference frequency is amplified by means of a vertical amplifier, this method is highly selective with respect to weak signals. There are 2 diagrams.

Card 1/1

The Synthesis of Na Isodecylbenzene Sulphonate (Sulphanole NP-2) on the Basis of Amylene Dimers. SOV/65-58-6-7/13

The optimal molar ratio of C_6H_6: iso-$C_{10}H_{20}$ was found to be 7.0 - 7.5 (Fig.1). The yield of the fraction 212° - 320°C was 112%; the optimal quantity of aluminium chloride catalyst was 0.1 mol - 7.5 mol of diisoamylene, and the optimum reaction temperature = 30°C (Fig.2). The yield of various fractions is given. When using diisoamylenes containing 0.89% of sulphur compounds the yield of the fraction 212°- 280°C was 61%, and the alkylation product had a high bromine number (15). The reaction was carried out at 5° - 7° and 18° - 20° when sulphuric acid was used as catalyst (Table 2). Yields were 98.1% and 79.2% respectively. The influence of the amount of acid on the yield of alkylbenzenes and on the bromine number of fractions 180° - 350°C during alkylation with sulphuric acid at 15° - 17°C (Fig. 3). The highest yield of isodecylbenzenes was obtained when 96% - 98% sulphuric acid was used. In this case the yield = 98.1%. It was found that when using H_2SO_4 a lower yield of alkylbenzene fraction and a higher bromine number was obtained than when using $AlCl_3$. Results of infra-red spectral analyses of the alkylbenzene fractions are given in Table 3. The tests

Card 2/4

The Synthesis of Na Isodecylbenzene Sulphonate (Sulphanole NP-2) on the Basis of Amylene Dimers.

on the sulphonation of isodecylbenzenes with oleum and neutralisation of the sulphonic acids were carried out at 35° - 40°C while adding oleum for 20 - 30 minutes, and subsequent mixing for 120 minutes. The sulphonic acids were neutralised with a 25% - 30% solution of NaOH, the temperature of neutralisation did not exceed 45° - 50°C. Fig.4: the quantity of oleum necessary for sulphonating the fraction 212°- 320°C of isodecylbenzenes depending on the content of SO_3 in oleum. Industrial experiments carried out in the plant VNII NP confirm the data obtained during laboratory tests. The physico-chemical properties of Na isodecylbenzene sulphonate were determined in VNII NP and in Leningrad in the All-Union Research Institute for Oils and Fats (VNIIZh) (Vsesoyuznyy nauchno-issledovatel'skiy institut zhirov (VNIIZh)) (Ref.13). Test results are given in Tables 4 and 5. The detersive action of isodecylbenzene sulphonates in hard water at 40°C and at 0.25% concentration of the active substance was compared with the detersive action of soap under identical conditions (Table 6). It was found that Sulphanole NP-2 could be used as detergent. Its detersive properties

SOV/ 65-58-6-7/13

The Synthesis of Na Isodecylbenzene Sulphonate (Sulphanole NP-2) On the Basis of Amylene Dimers.

in the pure form, at 0.25 concentration in the solution = 111% compared with the detergent properties of soap and 246% when mixed with 50% sodium carbonate. Sulphanole NP-2, prepared with $AlCl_3$, has much higher detergent properties than Sulphanole NP-2, prepared with H_2SO_4. Analogous results were obtained by the Central Research Institutes TsNIIshersti and TsNIIshelka. There are 6 Tables, 4 Figures, 13 References: 4 English, 8 Soviet, 1 German

ASSOCIATION:VNII NP

Card 4/4

KOSTIKIN, L.I., Cand Chem Sci -- "Synthsis of alkylbenzene sulfonates on a base of amylene dimers." Moscow, 1961. (Min of Higher Ed USSR. Moscow Inst of Petrochem and Gas Ind im Acad. I.M. Gubkin).

(KL, 4-61, 187)

FOTOLOVSKIY, L.A.; KOSTIKIN, L.I.

Synthesis of sodium isodecyl toluene sulfonate on a base of anylene dimers. Trudy VNII NP no. 9:170-176 '63.
(MIRA 17:6)

KOSTIKOV, L.Ye.

KOSTIKOV, L.Ye., kand. tekhn. nauk.

Calculating the thermal conditions for bar-type diesel-powered hammers. Stroi. i dor. mashinostr. 2 no.11:15-18 N '57. (MIRA 11:1)
(Hammers)

KOSTIKOV, L. Ye.

KOSTIKOV, L.Ye., kandidat tekhnicheskikh nauk.

Pressure gauges used in indicating diesel powered hammer operation. Vest.mash. 37 no.9:18-20 S '57. (MLRA 10:9)
(Pressure gauges) (Hammers)

KOSTIKOV, L.Ye., kand. tekhn. nauk.

Investigating operating conditions of diesel-powered hammers.
[Trudy] MVTU no.83:155-171 '58. (MIRA 11:6)
(Hammers) (Gas and oil engines)

DOYNIKOV, Nikolay Mikhaylovich, kand.tekhn.nauk; TURILOV, Grigoriy Ivanovich, dotsent; KHOMUTOV, Aron Iosifovich, kand.tekhn.nauk; KOSTIKOV, L.Ye., kand.tekhn.nauk, red.; GOLOVKO, B.N., tekhn.red.

[Mechanical engineering; manual for student of physico-mathematical departments of pedagogical institutes] Mashinovedenie; uchebnoe posobie dlia studentov fiziko-matematicheskikh fakul'tetov pedagogicheskikh institutov. Moskva, Gos.uchebno-pedagog.izd-vo M-va prosv.RSFSR, 1959. 395 p. (MIRA 12:12)
(Mechanical engineering)

KURSKIY, Ye.F., dorozhnyy master 8 okolotka (Bryansk); KOSTIKOV, A.I., dorozhnyy master 7 okolotka (Bryansk); ZENIN, P.I.; NAZYMOK, N.P. (Kaluga)

Letters of the "Zheleznodorozhnyi transport" readers in response to the article "Improving the stability of tracks laid on sand foundation." Zhel.dor.transp. 42 no.10:44 O '60. (MIRA 13:10)

1. Bryanskaya distantsiya puti Kalininskoy dorogi (for Kurskiy, Kostikov). 2. Brigadir 25 otdeleniya 9 distantsii puti Kalininskoy dorogi, Bryansk (for Zenin). 3. Zamestitel' nachal'nika Kaluzhskoy distantsii puti. (for Nazymok).

(Railroads--Track)

KOSTIKOV, E. I.

"Research on the Smoke-Stack of a Locomotive" in the book Some Problems on the Thermodynamic Research in Thermotechnics, Mashgiz, 1954.

KOSTIKOV, F.V.

Hydraulic feed unit used in long-time stand tests. Mashinostroitel' no.11:31 N '60. (MIRA 13:10)
(Feed mechanisms)

KOSTIKOV, I.F.; GRIBOV, P.M.

Fixture for making lenses used in lens compensators of gas pipelines. Rats. i izobr. predl. v stroi. no.56:15-16 '53. (Gas pipes) (MLRA 9:7)

KOSTIKOV, K. V.

KOSTIKOV, K. V., "Spore Formation and Viability of spores in Saccharomyces ellipsoideus (Rees) Hansen, S. globosus Osterwalder and in Hybrids Between these Species," Trudy Institute Genetiki, no. 15, 1948, pp. 153-162. 442.9 P44

SO: SIRA SI-19-53, 15 Dec 1953

ZHURAVLEV, A., arkhitektor; KOSTIKOV, L. kand.tekhn.nauk

Books about experimental planning and construction. Na stroi. Ros. no.5:34-35 My '61. (MIRA 14:7)
(Bibliography—Construction industry)

KOSTIKOV, L.M.

"History of strength of materials with a brief account of the history of the theory of elasticity and the theory of structures" by S.P.Timoshenko. Reviewed by L.M. Kostikov. Vop.ist.est. i tekh. no.2:299-306 '56. (MLRA 10:1)
(Strength of materials--History)

BOBKOV, A.S., kandidat tekhnicheskikh nauk; KOSTIKOV, L.M., inzhener.

Feliks Stanislavovich IAsinskii. Stroi. prom. 34 no.9:47-48 S '56. (MLRA 9:10)

(IAsinskii, Feliks Stanislavovich, 1856-1899)

KOSTIKOV, L., inzhener.

How reinforced concrete was created. Stroitel' no.3:27-28 Mr '57.
(Reinforced concrete) (MLRA 10:4)

KOSTIKOV, L.M.

BOBKOV, A.S., kandidat tekhnicheskikh nauk; KOSTIKOV, L.M., inzhener.

Leonhard Euler. Stroi. prom. 35 no.4:43-44 Ap '57. (MLRA 10:3)
(Euler, Leonhard, 1707-1783)

KOSTIKOV, I. M.: Master Tech Sci (diss) -- "The basic stages in the development of reinforced concrete". Moscow, 1958. 21 pp (Acad Sci USSR, Inst of the History of Science and Technology), 150 copies (KL, No 8, 1959, 136)

KOSTIKOV, Leonid Matveyevich; CHERNIKOVA, M.S., red.; MARAKASOVA, L.P., tekhn. red.

[A house comes of the production line]Dom s konveiera. Moskva, Izd-vo "Sovetskaia Rossiia," 1962. 91 p. (MIRA 16:3)
(Apartment houses)
(Construction industry--Production methods)

KOSTIKOV, L.M., kand.tekhn.nauk

History of the development of reinforced concrete. Mat. po ist. stroi. tekh. no.2:67-119 '62. (MIRA 16:5)
(Reinforced concrete)

KOSTIKOV, R.R.; D'YAKONOV, I.A.

Synthesis of 1-methylol-2,3-di-n-butyl-2-cyclopropene and stereoisomeric 1-methylol-2,3-di-n-butylcyclopropanes. Zhur.ob. khim. 32 no.7:2389-2390 Jl '62. (MIRA 15:7)

1. Leningradskiy gosudarstvennyy universitet.
(Cyclopropene) (Cyclopropane)

KOSTIKOV, R.R.; D'YAKONOV, I.A.

Dissociation constants of some substituted cyclopropane- and cyclopropenecarboxylic acids. Dokl. AN SSSR 149 no.4:853-855 Ap '63. (MIRA 16:3)

1. Leningradskiy gosudarstvennyy universitet im. A.A.Zhdanova. Predstavleno akademikom B.A.Kazanskim.
(Cyclopropanecarboxylic acid) (Cyclopropenecarboxylic acid) (Ionization)

D'YAKONOV, I.A.; KOSTIKOV, R.R.

Cyclopro nes and cyclopropenes. Part 1: Synthesis of stereoisomeric 1,2-di-n-butylcyclopropane-3-carboxylic acids and their esters. Zhur. ob. khim. 34 no. 5:1383-1389 My '64. (MIRA 17:7)

1. Leningradskiy gosudarstvennyy universitet.

D'YAKONOV, I. A.; KOSTIKOV, R. R.

Problem of obtaining double bond linkage in cyclopropene . ng formation. Part 1: Attempting the synthesis of 2,3-dibutyl-1-methylene- and 2,3-dibutyl-1-diphenylmethylene-cyclopropenes. Zhur. ob. Khim. 34 no.6:1722-1726 Je '64. (MIRA 17:7)

1. Leningradskiy gosudarstvennyy universitet.

D'YAKONOV, I.A.; KOSTIKOV, R.R.

New data on the synthesis of esters of stereoisomeric 1,2-dipropylcyclopropane-3-carboxylic acids. Zhur. ob. khim. 34 no.11:3843-3844 N '64 (MIRA 18:1)

1. Leningradskiy gosudarstvennyy universitet.

KOSTIKOV, R.R.; D'YAKONOV, I.A.

Phenylbenzylcyclopropenone. Zhur. ob. khim. 34 no.11:3845-3846 N '64 (MIRA 18:1)

1. Leningradskiy gosudarstvennyy universitet.

KOMENDANTOV, M.I.; D'YAKONOV, I.A.; GERMANOVA, I.; KOSTIKOV, R.R.

Reaction of aliphatic diazo compounds with unsaturated compounds. Part 24: Reaction of diazoacetic ester with 5-decyne and 4-octyne. Nature and amount of a catalyst as influencing the course of the reaction. Zhur.org.khim. 1 no.2:209-219 F '65.

(MIRA 18:4)

1. Leningradskiy gosudarstvennyy universitet.

5.3830 2209, 1274, 2109

S/190/60/002/009/022/023/XX
B004/B056

AUTHORS: Arbuzova, I. A., Kostikov, R. R., Propp, L. N.

TITLE: The Polymerization of Divinyl Benzal

PERIODICAL: Vysokomolekulyarnyye soyedineniya, 1960, Vol. 2, No. 9, pp. 1402-1404

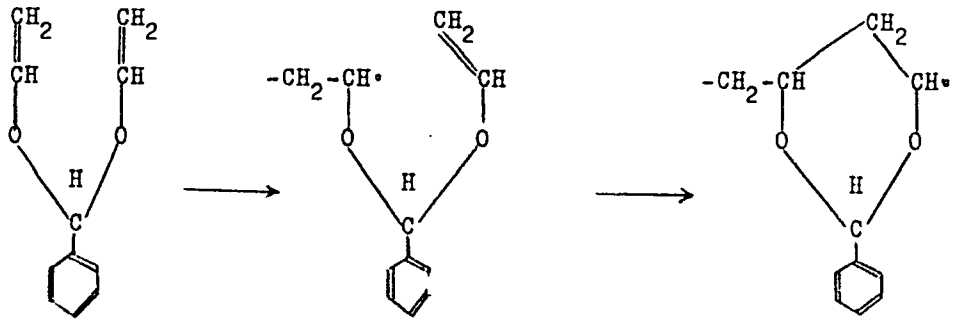
TEXT: I. A. Arbuzova, together with K. Sultanov has already carried out the polymerization of divinyl acetals (Ref. 4). The [illegible] purpose of the present work to carry on with studying this reaction and producing a new group of 1,6-dien-monomers, which polymerize under ring closure. The authors proceeded from divinyl benzal. They synthesized the di-β-chloroethylbenzal by heating ethylene chlorohydrin by means of benzaldehyde in benzene in the presence of HCl as a catalyst. By reaction of the di-β-chloroethylbenzal with dry KOH, they obtained the divinylbenzal. The polymerization of this compound was carried out in the presence of tert-butyl peroxide of azo-isobutyric acid-dinitril and irradiation by means of a ПРК-2 (PRK-2) mercury lamp at temperatures of between 20 and 145°C. The reaction lasted 20 to 240 hours. White powders, which were soluble in benzene,

Card 1/3

The Polymerization of Divinyl Benzal

S/190/60/002/009/022/02 XX
B004/B056

chloroform, dioxane, pyridine, and dimethylformamide were obtained. The molecular weight determined cryoscopically was between 1280 and 3550. By means of the bromine-bromate method, the number of the remaining double bonds was found to be 3-5%. As the physical properties exclude a three-dimensional structure, the authors assume ring closure according to the following scheme:



Card 2/3

The Polymerization of Divinyl Benzal

S/190/60/002/009/022/023/XX
B004/B056

There are 2 tables and 4 references: 1 Soviet and 5 US.

ASSOCIATION: Institut vysokomolekulyarnykh soyedineniy AN SSSR
(Institute of High-molecular Compounds of the AS USSR)

SUBMITTED: April 10, 1960

Card 3/3

KOSTIKOV, S.S., starshiy dorozhnyy master.

Good work in the summer provides trains with a "green street" in winter. Put' i put. khoz. no.2:19-20 F '57. (MLRA 10:4)

1. 4-ya mekhanizirovannaya okolotka Orlovskoy distantsii puti Moskovsko-Kursko-Donbasskoy dorogi.
(Railroads--Maintenance and repair)

BELEVICH, G.; KOSTIKOV, V.

The great "hunt." Radio no.11:12-13 N '65.

(MIRA 18:12)

L 05138-67 EWT(m)/EWP(t)/ETI IJP(c) JD/JR

ACC NR: AP6028187 SOURCE CODE: UR/0186/66/008/003/0369/0371

35
B

AUTHOR: Shvedov, V. P.; Strizhov, S. G.; Kostikov, V. A.

ORG: none

TITLE: Phosphate precipitation as a method of purifying weakly radioactive waste waters

SOURCE: Radiokhimiya, v. 8, no. 3, 1966, 369-371

TOPIC TAGS: water purification, phosphate, chemical precipitation, radioisotope, radioactive waste disposal

ABSTRACT: The purpose of the study was to ascertain the applicability of the phosphate precipitation method to the deactivation of weakly radioactive waste waters of complex chemical composition and to determine the purification coefficients thus obtained. In initial experiments on the removal of Sr^{90} alone, the method was found to be highly effective. The degree of purification increases somewhat (by 20%) when the ratio PO_4^{3-}/Ca^{2+} increases from 1 to 5. The amount of Ca^{2+} ion in the mixture affects the purification, and at a ratio $PO_4^{3+}/Ca^{2+} = 3:1$, the optimum amount of Ca^{2+} is 300 mg/dm^3. Phosphate precipitation was then carried out on waste waters containing $Sr^{89, 90}$, $Y^{90, 91}$, Ca^{45}, S^{35}, Ba^{133} and $Cs^{134, 137}$, at a Ca^{2+} concentration of 300 mg/dm^3, $PO_4^{3-}/Ca^{2+} = 5$, and at pH = 10.2-10.4. The results were quite satisfactory. The quantities of fission products removed from the solution were: $Sr^{89, 90}$, 99.4-

Card 1/2 UDC: 628.34

L 05138-67

ACC NR: AP6028187

99.9%; Y^{90}, ^{91}, 99.4-99.9; Ba^{133}, 96.7-99.4; Ca^{45}, 99.7-99.8, and S^{35}, 65%. Orig. art. has: 3 tables.

SUB CODE: 07,18/ SUBM DATE: 20Sep65/ ORIG REF: 005/ OTH REF: 001

Card 2/2

AUTHOR: Kostikov, V. SOV/107-58-2-22/32

TITLE: An Amateur TV Set (Lyubitel'skiy televizor)

PERIODICAL: Radio, 1958, Nr 2, p 36 - 41 (USSR)

ABSTRACT: This amateur TV set is composed of the kinescope "43LK3B", 18 tubes (6 "6Zh1P", 1 "6Zh5P", 1 "6P15P", 2 "6P14P", 1 "6P13S", 1 "6N1P", 2 "6I1P", 2 "5Ts4S", 1 "6Ts1oP", 1 "1Ts11P") and eight semiconductor diodes (4 "DG-Ts7", 2 "DG-Ts13", 1 "DG-Ts1", 1 "DG-Ts24"). The author made an effort to use parts from commercial Soviet TV sets, but these parts may also be easily manufactured by the amateur. Compared to other sets of this type, this one has an improved line scanning oscillator, a noise-resistant synchronization, automatic amplification control and remote control) The sensitivity is about 100 microvolts, the definition is 450-500 lines vertically and 550-600 lines horizontally. The TV set has 170 watts power consumption, which is reduced to 85 watts when only the FM receiver is used. The

Card 1/2

The program switch is designed for five TV channels and three FM channels. Figures 1 and 2 show the circuit diagram of this TV set. The article contains instructions for building and tuning this set. There are 4 circuit diagrams, 1 diagram, one graph, one drawing and one Soviet reference.

1. Television receivers--Design 2. Television receivers --Equipment

AUTHOR: Kostikov, V. SOV-107-58-4-51/57

TITLE: A Television Tuning Indicator (Indikator nastroyki v televizore)

PERIODICAL: Radio, 1958, Nr 4, pp 58-59 (USSR)

ABSTRACT: The author describes the television tuning indicator dealt with in "Funktechnik" Nr 20, 1957.
There is 1 circuit diagram, 1 block diagram and 1 figure.

1. Television tuning circuits--Equipment 2. Television receivers --Control systems

Card 1/1

AUTHOR: Kostikov, V. (Moscow) SOV/107-58-11-55/40

TITLE: Exchange of Experience (Obmen opytom) Widening the Frequency Characteristics of a Loudspeaker (Rasshireniye chastotnoy kharakteristiki gromkogovoritelya)

PERIODICAL: Radio, 1958, Nr 11, p 55 (USSR)

ABSTRACT: A reader describes how to make an additional diffuser for widening the high-frequency band of a loudspeaker. There are 2 diagrams.

Card 1/1

AUTHOR: Kostikov, V. SOV/107-59-1-33/51

TITLE: TV Tuning Indicators (Indikatory nastroyki televizorov)

PERIODICAL: Radio, 1959, Nr 1, pp 36-39 (USSR)

ABSTRACT: The author describes six designs of TV tuning indicators based entirely on sources from Western Europe. There are 5 circuits, one diagram, and two Soviet references.

Card 1/1

9(2)

05929
SOV/107-59-7-32/42

AUTHOR: Kostikov, V.

TITLE: A Simple L-F Amplifier

PERIODICAL: Radio, 1959, Nr 7, pp 49 - 50 (USSR)

ABSTRACT: The author describes a two-tube l-f amplifier having an output of 3.5 watts with two loudspeakers (1-GD-9, 5-GD-14). The nonlinear distortions of the amplifier do not exceed 3%. The maximum input voltage is 0.12 volts. The l-f preamplifier consists of a dual triode 6N2P, while a 6P14P is used in the output stage, as shown in the circuit diagram, Figure 1. The frequency characteristics of the amplifier may be changed within wide ranges. The output stage has two channels, one for the lower and one for the higher frequencies. The frequencies of 500-2000 cps are attenuated, thus the power of the lower frequencies was increased to 35db and to 15 db for the

Card 1/2

05929

SOV/107-59-7-32/42

A Simple L-F Amplifier

higher frequencies. Transformers from the receivers "Oktava", "Baykal", "Lyuks" or "Druzhba" may be used for building the amplifier. There are 3 diagrams, 1 circuit diagram and 1 graph.

Card 2/2

KOSTIKOV, Viktor Fedorovich; VASIL'YEV, A.A., red.; TROITSKIY, L.V., red.; FAYNSHMIDT, F.Ya., tekhn. red.

[Design of television receivers for amateurs] Konstruirovanie liubitel'skikh televizorov. Moskva, Izd-vo DOSAAF, 1961. 173 p. (MIRA 15:2)
(Television--Receivers and reception)

KOSTIKOV, V.

Television receiver for amateur use. Radio no.1:40-46 Ja '62.
(MIRA 15:1)
(Television--Receivers and reception)

KOSTIKOV, V., aspirant

DTU-10 passed the test. Znan. ta pratsia no.7:4 Jl '62. (MIRA 15:7)

1. Kiyevskiy inzhenerno-stroitel'skiy institut.
(Trolleybuses)

KOSTIKOV, V.F.; TROITSKIY, L.V., spets. red.; VASIL'YEV, A.A., red.

[How to build a radio receiver; principles of the design of simple electron-tube receivers] Kak postroit' radiopriemnik; osnovy konstruirovaniia prostykh lampovykh priemnikov. Moskva, DOSAAF, 1964. 245 p. (MIRA 18:6)

KOSTIKOV, V.

Antenna amplifiers with electronic tuning. Radio no.7:26-27 Jl '65. (MIRA 18:9)

DARGUNOVA, V.S.; KOSTIKOV, V.I.

Preparation of zirconium boride. Konstr. uglegraf. mat. no.1: 90-93 '64. (MIRA 17:11)

DARYUKOVA, V.S.; FINKEL'SHTEYN, G.B.; KOSTIKOV, V.I.

Preparation of titanium and zirconium nitrides. Konstr. uglegraf. mat. no.1:94-98 '64. (MIRA 17:11)

L 11315-65 EPA(s)-2/EWT(m)/EPF(n)-2/EWA(d)/EWP(t)/EWP(b) Pt-10/Pu-4 JD/WW/JG/WB
ACCESSION NR: AP4043306 S/0032/64/030/008/1022/1023

AUTHOR: Yelyutin, V. P.; Kostikov, V. I.; Maurakh, M. A.

TITLE: Unit for study of wetting of solids by molten metals

SOURCE: Zavodskaya laboratoriya, v. 30, no. 8, 1964, 1022-1023

TOPIC TAGS: wetting, contact angle, molten metal wettability, solid substance wettability, solid wettability, metal wettability

ABSTRACT: A unit has been developed for determination of the wettability of solids by molten metals. The unit has separate heating systems for the solids to be wetted and for wetting metal, which prevents interaction between solid and metal during heating and ensures a good contact between the metal drop and solid surface. The unit consists of a detachable vacuum chamber containing two heaters, and a vacuum system which produces a vacuum of $5 \cdot 10^{-5}$ mm Hg at room temperature and of 10^{-4} mm Hg at 2300K. The unit works as follows: a specimen of a solid is heated to a desired temperature, the metal is melted, and a single drop of it is allowed to come down on the tested surface. The drop form and kinetics of its spreading are recorded by a movie camera. Orig. art. has: 2 figures.

Card 1/2

L 11315-65
ACCESSION NR: AP4043306

ASSOCIATION: Moskovskiy institut stali i splavov (Moscow Institute of Steel and Alloys)

SUBMITTED: 00	ATD PRESS: 3101	ENCL: 00
SUB CODE: MM	NO REF SOV: 001	OTHER: 001

Card 2/2

L 19837-65 EWG(j)/EWP(e)/EPA(s)-2/EWT(m)/EPF(c)/EPF(n)-2/EPR/EWP(t)/EWP(b) Pr-4/Ps-4/Pt-10/Pu-4 IJP(c)/AEDC(a)/ASD(f)-3/ASD(m)-3 JD/WW/JG/WH

ACCESSION NR: AP4049061 S/0148/64/000/011/0005/0010

AUTHOR: Yelyutin, V. P.; Kostikov, V. I.; Maurakh, M. A.

TITLE: The kinetics of the spreading of titanium on graphite

SOURCE: IVUZ. Chernaya metallurgiya, no. 11, 1964, 5-10

TOPIC TAGS: titanium, titanium spreading, graphite, spreading kinetics, kinematic viscosity, interphase energy

ABSTRACT: Since the experimental data demonstrate that the equation predicting the spread of a liquid on a solid surface, assuming Newtonian flow, is off by a factor of 1.5-2, it was reduced, first without consideration of weight, and then in expanded form to consider the weight. Kinematic viscosity, a factor in the latter equation, changes with the interaction of titanium and graphite. This change was predicted and was inserted into the expanded equation mentioned above, which was then reintegrated to give the spreading time as a function only of the radius of the droplet:

$$\left[\frac{13\pi A v_0 \rho^2 \chi}{184 m \Delta\sigma} r^4 - \frac{13 A v_0 \rho^2 g \chi}{276 \Delta\sigma^2} r^3 + \frac{13 A v_0 \rho^2 m g^2 \chi}{368\pi \Delta\sigma^3} r^2 - \frac{13 A v_0 \rho^2 m^2 g^2 \chi}{368\pi^2 \Delta\sigma^4} r + \right.$$

$$\left. + \frac{13 A v_0 \rho^2 m^3 g^3 \chi}{736\pi^3 \Delta\sigma^5} \ln\left|\frac{2\pi\Delta\sigma}{mg} r + 1\right|\right]_0^{\frac{23}{13}} = \tau.$$

Card 1/3

where m = mass of the drop, $\Delta\sigma$ = "drawing" force, p = density, x = coefficient depending on the shape of the drop, V_0 = kinematic viscosity of pure titanium, A = coefficient depending on the properties of graphite and its interaction with titanium, r = radius of the drop, and t = time. Experimental verification of the equation was then provided. Titanium of 99.85% purity was placed on a graphite surface, finegrained and with an overall porosity of 16%, at a temperature of 2000K. Temperatures were measured by a tungsten-rhenium thermocouple with an accuracy of 10C, and all experiments were carried out in a vacuum at $2X10^{-5}$ mm Hg. The process was photographed by a camera with a speed of 24 frames per second, which permitted exact measurement for any instant of time. Experimental data were plotted on graphs showing radius of expansion as a function of time and velocity as a function of radius, with comparative curves predicted by the authors' equations. The graphs show the close correspondence of only the equations which consider the weight and kinematic viscosity of the drop. These data may apparently be used to predict the spreading velocity of droplets of similar weight. The velocity might also be used to determine the interphase energy at the liquid-solid border of an extremely thin liquid phase. Orig. art. has: 2 graphs, 2 tables, 5 photomicrographs, and 20 formulas.

ASSOCIATION: Moskovskiy institut stali i splavov (Moscow Institute of Steel and Alloys)

L 19837-65

ACCESSION NR: AP4049061

0

SUBMITTED: 14Apr64 ENCL: 00 SUB CODE: MM

NO REF SOV: 006 OTHER: 004

Card 3/3

[illegible] 3090/0093

[illegible]geneva, V. S.; Kostikov, V. I.

[illegible]paration of zirconium boride

SOURCE: Konstruktsionnyye uglegrafitovyye materialy (Carbon and graphite construction materials); sbornik trudov, no. 1. Moscow, Izd-vo Metallurgiya, 1964,

TOPIC TAGS: refractory metal, boron alloy, vacuum refining, zirconium, hardening method

ABSTRACT: The borides of refractory metals are outstanding among metalloid [illegible] for corrosion resistance, infusibility and hardness. The combination of these properties makes it possible to use these compounds for creating fireproof and refractory materials. The authors studied the effect on the purity and composition of the boride produced when small amounts of boron oxide are added [illegible] for producing ZrB_2 by the borocarbide method. The initial materials for research were: industrial zirconium dioxide containing 2.[illegible]% SiO_2,

Card 1/2

ACCESSION NR: AT5003514

1.1% TiO and 0.12% Al_2O_3; industrial boron carbide containing 74.16% B, 23.41% C_{comb}, 1.3% Si and 0.7% Fe; chemically pure boron oxide; lamp black. It is shown that the additon of B_2O_3 to the charge improves the quality of the product when producing ZrB_2 by the thermal vacuum method according to the reaction $2ZrO_2+B_4C+3C=2ZrB_2+4CO\uparrow$. The optimum quantity of boron oxide to be added to the charge is 7.5%. It is shown that in carrying out the process in a TVV-4 [illegible] industrially pure materials, it is possible to produce large [illegible] without additional purification [illegible] tables

ASSOCIATION: none

SUBMITTED: 20Dec63 ENCL: 00 SUB CODE: MM

NO REF SOV: 005 OTHER: 002

Card 2/2

EWT(d)/EWT(e)/EPA(s) ... EWP(t)/EWP(k)/EWP(b) ...

ACCESSION NR: AT5003515 Ps-4/Pt-10/Pu-4 S/0000/64/000/001/0094/0098

JD/WW/JG/GS/AT/WH

AUTHOR: Dergunova, V. s.; Finkel'shteyn, G. B.; Kostikov, V. I.

TITLE: ...ducing titanium and zirconium nitrides

SOURCE: Konstruktsionnyye uglegrafitovyye materialy (Carbon and graphite construction materials); sbornik trudov, no. 1. Moscow, Izd-vo Metallurgiya, 1964, ...

TOPIC TAGS: refractory metal, nitriding, superconductivity, automatic control, titanium compound, zirconium compound

ABSTRACT: Nitrides of the transition metals in the fourth and fifth groups in the periodic system of elements have high melting points as well as high chemical and thermal stability. This has made it possible to use them as fireproof- ... and refractories. The relatively high electrical conductivity ... type, and the capacity of the nitrides to pass over to the superconducting state gives good prospects for using these materials in electronics and

L 38088-65
ACCESSION NR: AT5003515

2

automation. Direct nitriding of metal powders and nitriding of metal oxides mixed with carbon black are the most promising methods for industrial use. In this [illegible] authors studied the conditions for producing TiN and ZrN from oxides, and investigated methods for removing carbon and oxygen from the obtained nitrides. The initial materials for the research were: industrial titanium dioxide containing 0.13% Fe_2O_3, 0.16% Al_2O_3, 59% Ti; industrial zirconium dioxide containing 2.7% SiO_2, 1.1% TiO_2, 0.12% Al_2O_3; lamp black fired at 400°C. It is established that it is possible to improve the chemical composition of titanium and zirconium nitrides produced by nitriding the corresponding oxides mixed with carbon black, firing them in nitrogen. It is shown that it is preferable to use an excess of carbon in comparision with that required for the reaction $MeN+CO$ when producing titanium nitride. Orig. art. has: 3 figures, [illegible]

ASSOCIATION: none

SUBMITTED: 20Dec63 ENCL: 00 SUB CODE: IC, MM

NO REF SOV: 005 OTHER: 002

Card 2/2

L 13561-66 EWT(m)/EWP(t)/EWP(b) IJP(c) JD/JG/WB

ACC NR: AP6001238 SOURCE CODE: UR/0363/65/001/012/2208/2211

AUTHOR: Yelyutin, V. P.; Kostikov, V. I.; Levin, V. Ya.; Maurakh, M. A.; Mitin, B. S.

ORG: Institute of Steel and Alloys (Institut stali i splavov)

TITLE: Wetting of tungsten with liquid aluminum oxide

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 1, no. 12, 1965, 2208-2211

TOPIC TAGS: tungsten, aluminum oxide, silicon dioxide, molybdenum, METAL FINISHING

ABSTRACT: The wetting of tungsten and molybdenum with liquid Al_2O_3 and of tungsten with a liquid Al_2O_3-SiO_2 mixture was studied by placing a drop of the liquid oxide or mixture on a plate of rolled W or Mo. The drop was allowed to spread, the temperature was quickly lowered, and the area covered by the oxide was measured. A formula was derived for the dependence of this area on the mass of the drop in the absence of interaction between the liquid and solid and for small equilibrium contact angles:

$$m = \rho\pi r^3 \overline{\gamma k \cos\theta - 2}$$

$$m = \frac{\rho}{\gamma\pi} \overline{\gamma k \cos\theta - 2} \cdot S^{3/2},$$

where S is the area of spread. S was calculated from this formula for the systems W-Al_2O_3, W-Al_2O_3-SiO_2 and Mo-Al_2O_3, and was compared with the measured values. It was shown that

Card 1/2

UDC: 546.78:532.64

L 13561-66

ACC NR: AP6001238

as the interaction between the solid and liquid increases, the discrepancies between the two sets of values become more appreciable: in the case of Mo-Al_2O_3, the deviations from the calculated curve were much greater than in the case of W-Al_2O_3, because the effective charge of Mo is greater than that of W. Orig. art. has: 3 figures and 6 formulas.

SUB CODE: 11 / SUBM DATE: 05Jul65 / ORIG REF: 002 / OTH REF: 001

Card 2/2

L 45218-65 EPF(c)/EPF)n)-2/EPR/EWG(j)/EPA(s)-2/EPA(w)-2/EWT(m)/EWP(1)/
EWP(b)/EPA(bb)-2/EWP(e)/EWP(t) Pr-4/Ps-4/Pt-7/Pu-4/Pab-10 IJP(c) WH/
ACCESSION NR: AP5008384 WW/JG/JD S/0148/65/000/003/0005/0009

70
69
B

AUTHOR: Yelyutin, V. P.; Kostikov, V. I.; Maurakh, M. A.

TITLE: Spreading of liquid titanium on graphite

SOURCE: IVUZ. Chernaya metallurgiya, no. 3, 1965, 5-9

TOPIC TAGS: titanium, graphite, surface diffusion

ABSTRACT: Of the various processes occurring during the interaction of liquid titanium and graphite, the process of capillary penetration and that of carburization are examined in particular. Since equilibrium of surface forces does not occur during spreading, it is assumed that the arrest of the isothermal process of the spreading of a drop takes place when the sum of the mass of the metal permeating the graphite and crystallizing on its surface equals the mass of the original drop. An equation for calculating spreadability is derived and tested against experimental data. Five grades of graphite of different grain size and porosity and drops of titanium iodide were used in the tests. Tests were run in a vacuum with a graphite sample temperature of about 2000°K. Agreement of calculated and experimental re-

Card 1/2

L 45218-65
ACCESSION NR: AP5008384

sults was satisfactory, the deviation ranging from 5 to 40%. It is assumed that some constant was overlooked, possibly the deviation of the true graphite structure from the calculated model. Orig. art. has: 2 figures, 1 table, 7 formulas.

ASSOCIATION: Moskovskiy institut stali i splavov (Moscow Institute of Steel and Alloys)

SUBMITTED: 14Apr64 ENCL: 00 SUB CODE: MM

NO REF SOV: 005 OTHER: 000

BSB

Card 2/2

L [illegible] EWG(j) EWP(e)/EPA(s)-2/EWT(m)/EPF(c)/EWP(1)/EPF(n)-2/EWG(m)/
EWT EPA(w) 2/T/EWI [illegible]/EPA(bb)-2/EWP(b)/EWA(c) Pab-10/Pr-4/Ps-4/Pt-10/Pu-4

ACCESSION NR: AP5003496 IJP(c) JD/WW/JG S/0148/65/000/001/0050/0054
AT/WE

AUTHOR: Yelyutin, V.P.; Kostikov, V.I.; Maurakh, M.A.

TITLE: Graphite impregnation with liquid titanium

SOURCE: IVUZ. Chernaya metallurgiya, no. 1, 1965, 50-54

TOPIC TAGS: titanium impregnated graphite, cermet, impregnation formula, graphite impregnation, liquid titanium

ABSTRACT: Impregnation of porous bodies by liquid metals is widely used in the production of cermets. However, no theory of the process exists. All general theories operate with unreliable facts and results. The authors derive the theory of impregnation for the case of two phases interacting chemically. Such is the case of graphite impregnation with liquid titanium. The analysis is based on the following factors influencing capillary penetration: 1. hydrostatic pressure in the liquid; 2. force of spreading, 3. force of porous resistance; 4. gravity. A formula is derived and subjected to experimental verification. Fine-grain dense graphite (density 14%) was impregnated with liquid iodide titanium (temp. 2000K, vacuum $5 \cdot 10^{-4}$ mm Hg). Preliminary tests by immersion of graphite samples into molten metal showed capillary impregnation completed within a few seconds. Therefore, further tests were based on spreading of a

Card 1/2

L 40570-65
ACCESSION NR: AP5003496

drop of liquid titanium on a graphite surface. The weight of the metal absorbed by impregnation was calculated by deducting the mass of the surface layer from the initial mass. The article gives a calculation method for the impregnation of graphite with chemically active metals taking into consideration surface tension and viscosity of the metal, graphite porosity and the interaction of both phases (changing m.p., C solubility, carbonizing rate). Orig. art. has: 2 figures and 5 formulas.

ASSOCIATION: Moskovskiy institut stali i splavov (Moscow steel and alloys institute)

SUBMITTED: 03Jun64 ENCL: 00 SUB CODE: MM

NO REF SOV: 004 OTHER: 004

Card 2/2

L 27428-66 EWT(m)/EPF(n)-2/T/EWP(t)/ETI IJP(c) JD/WW/JG

ACC NR: AP6017685 SOURCE CODE: UR/0363/65/001/008/1285/1288

AUTHOR: Kostikov, V. I.

ORG: Institute of Steel and Alloys (Institut stali i splavov)

TITLE: Problem of constructing a phase diagram for ZrB_2 - Cr

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 1, no. 8, 1965, 1285-1288

TOPIC TAGS: alloy phase diagram, metal pressing, refractory alloy, zirconium, boron, chromium, metal chemical analysis

ABSTRACT: Samsonov, et al, Bor, Yego Soyedineniya i Splavy (Boron, its compounds and alloys, Metallurgizdat, Moscow, 1960, pp. 498-500; Splavy Na oshove Tugoplavkikh Soyedineniya (Refractory base alloys), Oborongiz, Moscow, 1961), cited data pertaining to the phase diagram for ZrB_2-Cr system. The present study was devoted to making it more exact. Alloy test specimens of 8 mm diameter and 10-12 mm height were prepared by hot pressing at 1400-2500°C with specific pressing pressures of 130-140 kg/cm^2. The chemical composition of the hot-pressed test specimens did not differ from the starting for all intents and purposes. Based on the obtained data, it appears possible to construct a more precise phase diagram for the system ZrB_2-Cr as compared to the one mentioned above in Samsonov's two works. This more precise phase diagram has two eutectics and a ternary chemical compound described by the formula $CrZrB_2$. The alloys on the Cr side have a eutectic at about 1490°C. The eutectic point corresponds to about 7-8 mol. % ZrB_2. In the case of alloys at the zirconium boride side, the eutectic temperature is about 1915°C and the eutectic point corresponds to 92-93 mol. % ZrB_2. Orig. art. has: 1 table and 3 figures. [JPRS]

SUB CODE: 11, 13 / SUBM DATE: 19Jan65 / ORIG REF: 002

Card 1/1

UDC: 546.831'76'27

L 27824-66 EPF(n)-2/EWT(m)/ETC(F)/EWG(m)/EWP(t)/ETI WW/JG/JD

ACC NR: AP6015731 (A) SOURCE CODE: UR/0032/66/032/005/0626/0627

AUTHOR: Yelyutin, V. P.; Kostikov, V. I.; Levin, V. Ya.; Maurakh, M. A.; Mitin, B. S.

ORG: Moscow Institute of Steel and Alloys (Moskovskiy institut stali i splavov)

TITLE: Unit for studying the wetting of solids with liquid refractory metals or compounds

SOURCE: Zavodskaya laboratoriya, v. 32, no. 5, 1966, 626-627

TOPIC TAGS: wetting, refractory metal, liquid metal

ABSTRACT: A unit for studying the wetting of solids with liquid refractory metals such as titanium, zirconium, vanadium, chromium, niobium, molybdenum, rhenium, tantalum, and tungsten has been designed and built. The spreading of a molten metal droplet on the solid, the contact angle, and other parameters are recorded by a high-speed motion-picture camera and can also be observed by television. The unit has a water-cooled vacuum chamber where the tested specimen (150 mm long and 50 mm wide) is placed and heated by the electric current to the desired temperature, up to 3000C. At the top of the vacuum chamber, a tiny arc furnace melts the tested metal, a droplet of which is dropped on the tested solid. A shielding gas atmosphere may be used in testing, and the vacuum in the chamber may be varied from $5 \cdot 10^{-5}$ mm Hg at room tempera-

Card 1/2 UDC: 532.23.07

L 27824-66

ACC NR: AP6015731

ture to $1 \cdot 10^{-3}$ mm Hg at 3000C. The specimen temperature is measured by an electron pyrometer. Orig. art. has: 1 figure. [ND]

SUB CODE: 11/ 11/ SUBM DATE: none/ ORIG REF: 001/ ATD PRESS: 5003

Card 2/2

L 43736-66 EWT(m)/EWP(t)/ETI IJP(c) WW/JD/JH/JG

ACC NR: AP6030769 SOURCE CODE: UR/0363/66/002/009/1599/1603

AUTHOR: Kostikov, V. I.; Mitin, B. S.; Roytberg, M. B. 54 B

ORG: Moscow Institute of Steels and Alloys (Moskovskiy institut stali i splavov)

TITLE: Reaction between tungsten and molten aluminum or silicon oxides

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 2, no. 9, 1966, 1599-1603.

TOPIC TAGS: tungsten compound, aluminum oxide, silicon oxide, TUNGSTEN, CHEMICAL REDUCTION, VAPORIZATION

ABSTRACT: The reaction between tungsten and molten aluminum or silicon oxides at 2300—2700C has been investigated. It was found that the reaction was complex and

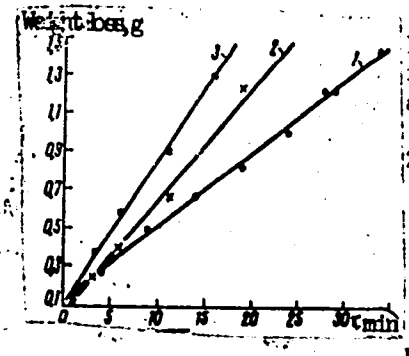


Fig. 1. Time dependence of weight loss into tungsten-molten aluminum oxide system at:

2300C (1), 2500C (2), and 2700C (3).

Card 1/2 UDC: 546.78+546.623-31+546.28

Card 2/2

ACC NR: AR6035413 SOURCE CODE: UR/0137/66/000/009/A013/A013

AUTHOR: Yelyutin, V. P.; Kostikov, V. I.; Maurakh, M. A.

TITLE: Investigation of contact interaction between liquid titanium with graphite

SOURCE: Ref. zh. Metallurgiya, Abs. 9A81

REF SOURCE: Sb. Poverkhnostn. yavleniya v rasplavakh i voznikayushchikh iz nikh tverd. fazakh. Nal'chik, 1965, 345-351

TOPIC TAGS: titanium, liquid metal, graphite, carburization, titanium alloy, temperature dependence, porosity, surface tension

ABSTRACT: When liquid titanium comes in contact with graphite, carburization takes place, leading to solidification. The authors investigated carburization of Ti and its alloys by melting and soaking the liquid metal in the graphite crucibles under different conditions. On the basis of an analysis of the isothermal carburization curves, they determined the influence of the temperature, the porosity of the graphite, the atmosphere of the furnace, and of the alloying on the carburization process. A logarithmic equation for the kinetics of the carburization is obtained by trial and error. The viscosity of the liquid titanium increases with increasing carbon concentration, first slowly and then rapidly, this being connected with the release of carbide-phase particles from the liquid. Data are obtained on the viscosity of alloys of titanium with Fe, Si, Ni, Al, Mo, Zr, Cu, and Co. The surface tension σ of Ti was measured by the method of maximum pressure in the bubble. The carbon increases the σ

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of titanium. An equation is obtained for the capillary penetration of liquid titanium under conditions when it interacts chemically with the graphite. The carburization process is determined by the initial stage of the external mass transfer. An equation relating the mass of the drop with the area on which it spreads is obtained. The results of the calculation by means of this equation are compared with the experimental data on the spreading of liquid titanium and alloys over graphite with different properties. Sufficiently good agreement between the calculated and the experimental data is obtained. 6 illustrations. M. Krasheninnikov [Translation of abstract]

SUB CODE: 11

Card 2/2

ACC NR: AR6035105 SOURCE CODE: UR/0137/66/000/008/E003/E003

AUTHOR: Yelyutin, V. P.; Kostikov, V. I.; Maurakh, M. A.

TITLE: Determining the spreading rate of molten titanium over a graphite surface

SOURCE: Ref. zh. Metallurgiya, Abs. 8E15

REF SOURCE: Sb. Poverkhnostn. yavleniya v rasplavakh i voznikayushchikh iz nikh tverd. fazakh. Nal'chik, 1965, 352-357

TOPIC TAGS: titanium, graphite, molten metal, fluid kinetics

ABSTRACT: A device has been developed for investigating the kinetics of spreading of molten metal, in which the graphite and the metal are heated separately, this prevents their interaction during the heating and permits the introduction of a drop of the molten metal into contact with surface of the specimen. The kinetics of spreading of the drop was analyzed with the aid of motion-picture filming through portholes. The data on the spreading kinetics of molten titanium are presented graphically. The necessity is established for taking into account the

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drop's force of gravity and its chemical reaction with graphite. V. Fomenko. [Translation of abstract] [NT]

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Card 2/2

L 23636-65 EWT(m)/EWP(j) Pc-4 RM
ACCESSION NR: AP5002824 S/0191/65/000/001/0023/0027

AUTHOR: Militskova, Ye. A.; Viktorov, Ye. S.; Sokolov, A.D.; Kostikov, V.P.

TITLE: The die casting of polyformaldehyde

SOURCE: Plasticheskiye massy, no. 1, 1965, 23-27

TOPIC TAGS: polyformaldehyde, die casting melt index, impact toughness, bending strength, frost resistance, polymer crystal structure, mold stability, polymer inflammability, plastic casting

ABSTRACT: The authors investigated the conditions of die casting and the properties and fields of application of cast polyformaldehyde (PFA). The construction and outfitting of the die machine (heating cylinder, jet, die mold and temperature control) and the casting technique are described in detail. The die casting of PFA is possible only in a narrow temperature interval, 180-195C being most common. The stay of the material in the cylinder is calculated by formula; for a die machine with a plunger diameter of 40 mm and a 210C cylinder temperature, the time is 60 min. The optimum mold temperature (determined by article thickness) is 130C, the optimum casting pressure is 1200-1500 kgc/cm^2, and the duration of the casting cycle is about 10 sec./mm of article thickness. The casting temperature is dependent on the melt index of the PFA. Articles made from

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ACC NR: AR7001774 SOURCE CODE: UR/0169/66/000/010/D023/D023

AUTHOR: Kostikov, V. U.

TITLE: Galvanic effects of point and linear sources on single-wire circuits in multilayer ground structure

SOURCE: Ref. zh. Geofizika, Abs. 10D146

REF SOURCE: Nauchn. tr. Omskiy, in-t inzh. zh.-d. transp. v. 62, 1965, 38-47

TOPIC TAGS: linear system, circuit theory, coupling circuit, wire, galvanic effect, earth structure

ABSTRACT: Power supply systems containing elements galvanically connected with the ground (rails, groundings) under certain conditions are the sources affecting single wire coupling circuits and subsurface metallic structures. The degree of galvanic effects is determined not only by the shape and location of the sources but to a far greater extent by the electrical properties and ground structure. In formulating the theory of galvanic effects, it is usually assumed that the electrical structure of the earth is homogeneous. Such an assumption considerably simplifies

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the theory and calculation of (galvanic) effects but it can result in gross errors in cases of nonhomogeneous earth structure. Therefore, the theory of galvanic effects of point and linear sources on single-wire circuits grounding is discussed for the case of a horizontal earth structure. Yu. Kaznacheyeva. [Translation of abstract] [AM]

SUB CODE: 08/

Card 2/2

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Clinical and electroencephalographic studies on schizophrenic patients with chronic verbal hallucinosis in aminazine and propazine therapy. Vop. psikh. nevr. no.10:339-352 '64. (MIRA 18:12)

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